

CCT395, Week 12

Storage, Grid Computing, Review

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Potential Problems

File corruption

interrupted write
other reasons

Disk corruption

hardware breaks

Large scale hardware loss

e.g., fire



Yoda



your laptop

Backup

mysqldump

```
mysqldump --user=kenobio --password menagerie > menagerie.sql  
mysql> source menagerie.sql
```

hot backup

replication

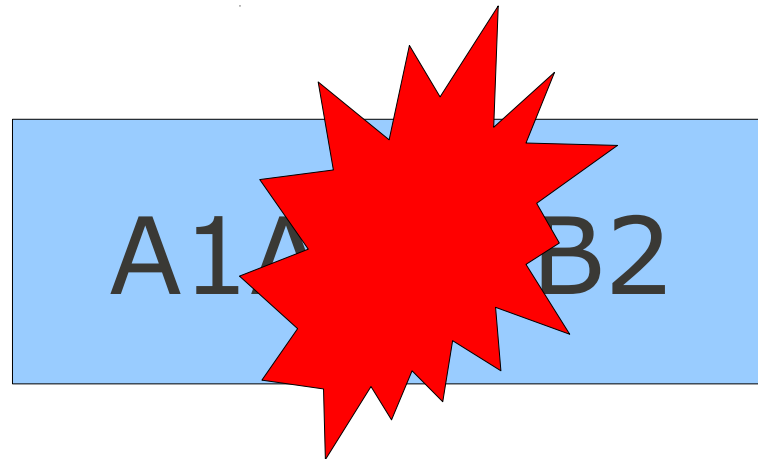
off-site copies

RAID



combining disks for reliability
and/or performance

No RAID



RAID-0



can be faster, no gain in reliability

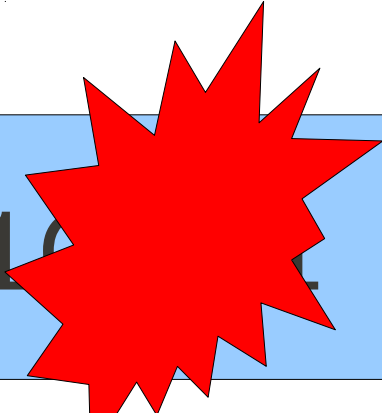
RAID-1



faster reading, slower writing
can withstand losing one disk

RAID > 2

A1B1C1D1



A2B2C2D2

ApBpCpDp

RAID >2

A1B1C1D1

A2B2C2D2

ApBpCpDp

reasonable reliability,
not too wasteful

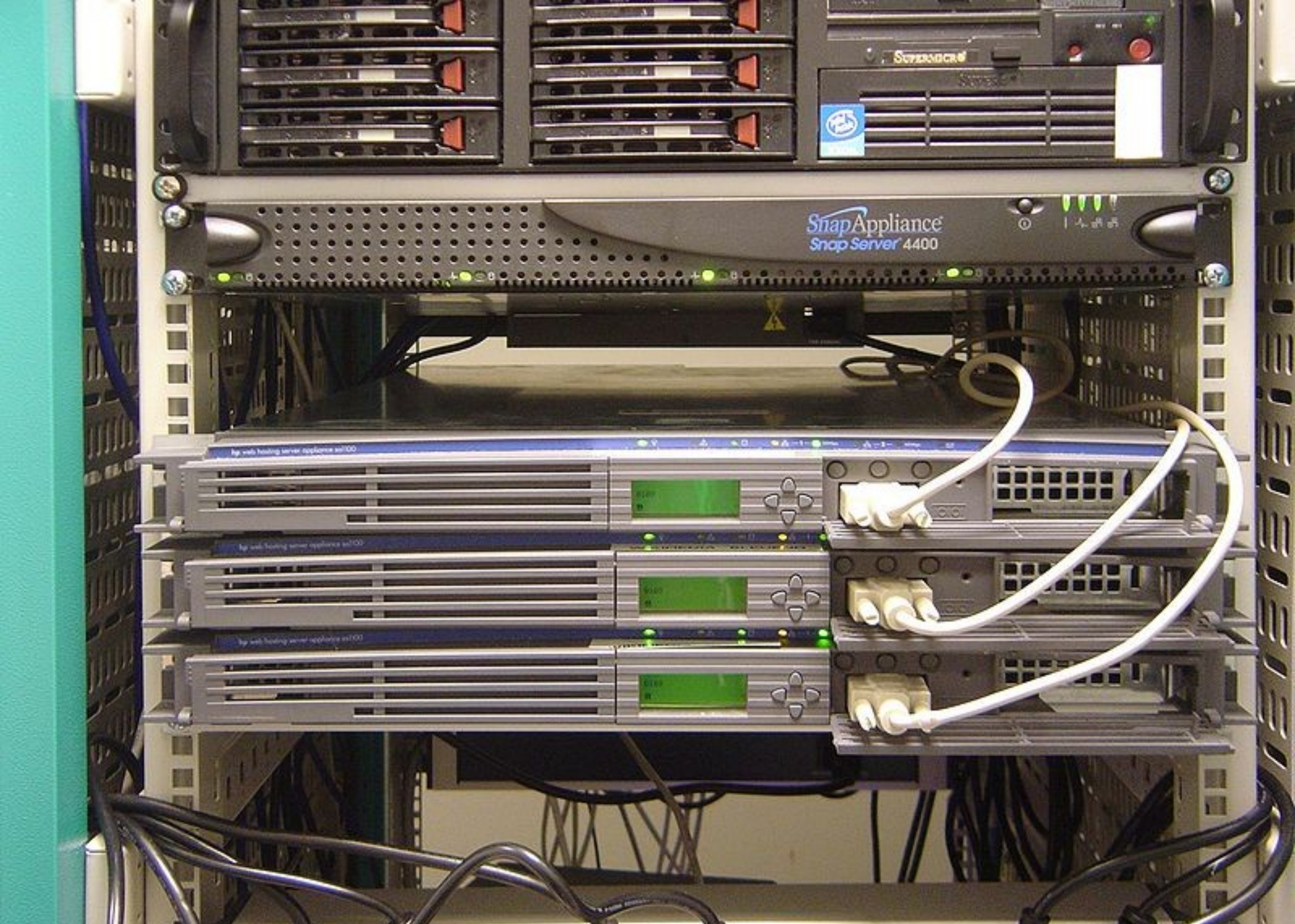


image source: http://en.wikipedia.org/wiki/File:Paris_servers_DSC00190.jpg

Hosting

Managed server

you get an account (like on yoda)

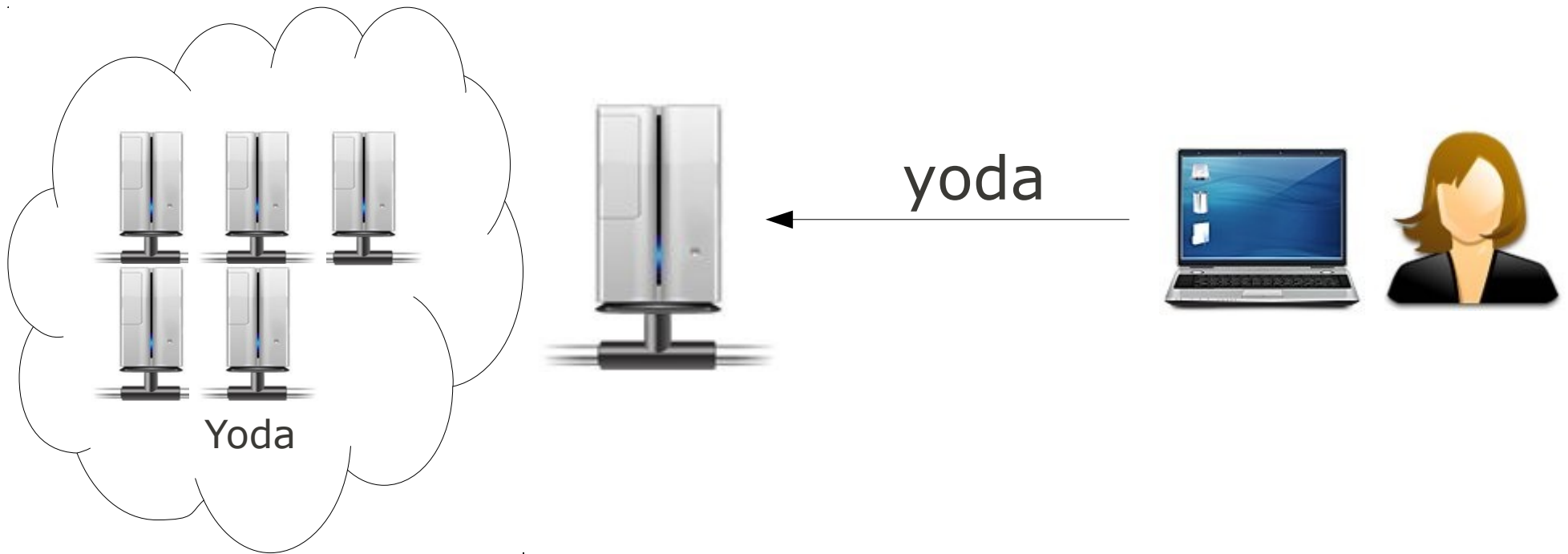
Private server

you get your own computer

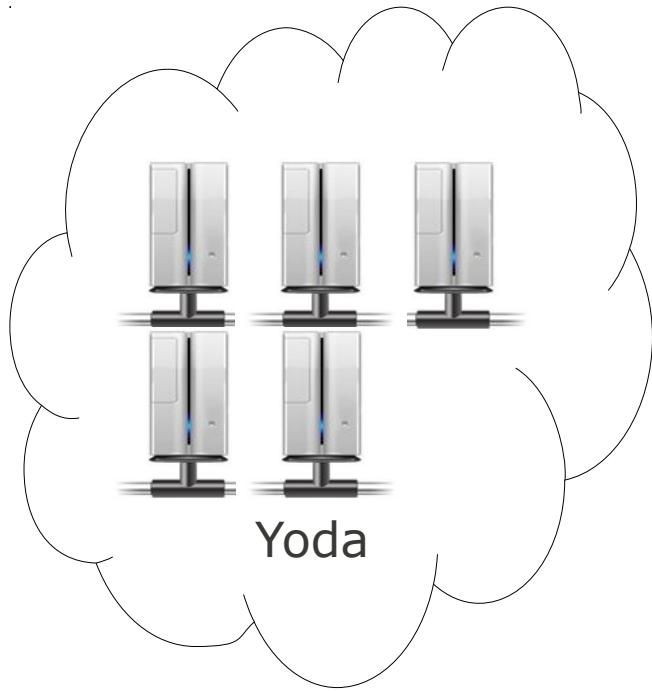
Virtual private server (VPS)

you get a *virtual* computer

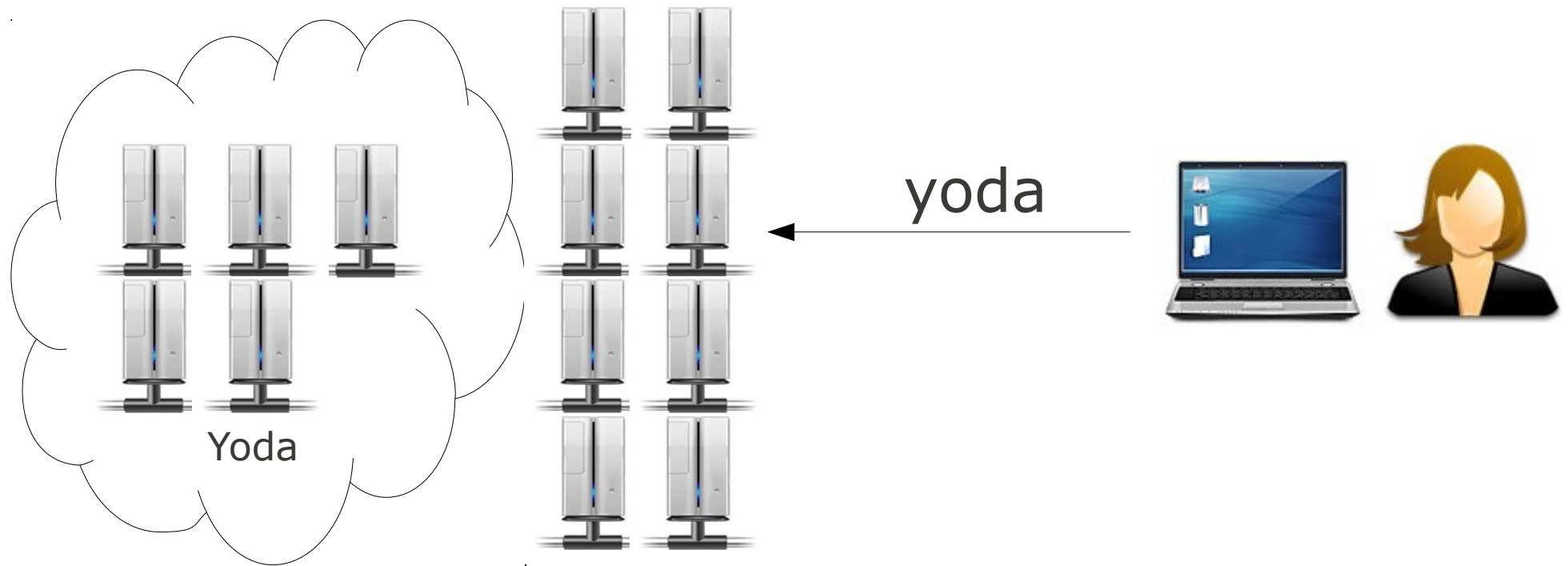
VPS



VPS



Grid Computing



can provide virtual servers or other services

Examples

Amazon Web Services

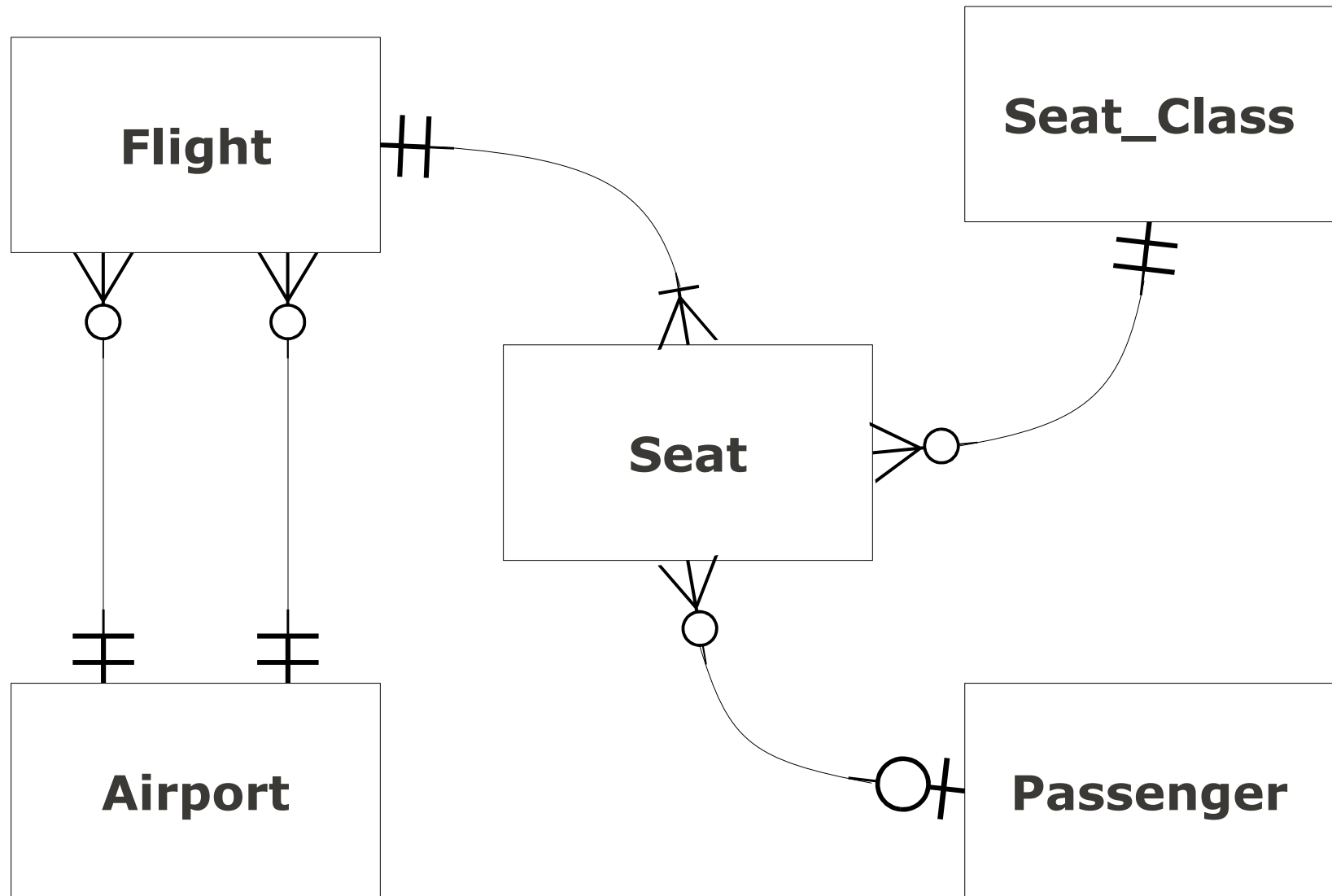
virtual storage, servers, db

Google's AppEngine

Google-specific API

Questions?

Mississauga Airlines



Who is flying to LAX in the aisle?

```
select passenger.last_name,  
       passenger.first_name  
from passenger  
join _____ using _____  
join _____ on _____  
where _____="aisle"  
and _____="LAX";
```

Which seat class has most passengers?

```
select seat_class.name
```

```
from _____
```

```
join seat_class
```

```
on _____
```

```
_____ by _____
```

```
_____ by _____
```

```
_____
```